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**From:** Grams, Bradley [grams.bradley@epa.gov]  
**Sent:** 6/12/2017 8:37:39 PM  
**To:** Beslow, Mike [beslow.mike@epa.gov]; Mendez, Thomas [mendez.thomas@epa.gov]; Cullen, Raymond [cullen.raymond@epa.gov]; Whelan, Ann [whelan.ann@epa.gov]; Riley, Ellen [riley.ellen@epa.gov]  
**CC:** Dixit, Naeha [dixit.naeha@epa.gov]; Krueger, Thomas [krueger.thomas@epa.gov]; Martig, Anton (Tony) [martig.anton@epa.gov]  
**Subject:** RE: Iron Guard Usage at ArcelorMittal Central Treatment Plant

Hey Mike:

With regard to #4, three things:

- Success is not equivalent to "allowed use." They should confirm that Nalco intended the product for direct discharge under NPDES or otherwise, which may not necessarily be on a label. For instance, is this product intended for POTW or industrial WWTP use? Or somewhere else? The tech specifications I read were not clear on that front, particularly given the special circumstances on the site.
- Amphoteric polymers will change their characteristics depending upon the pH of the solution they are in (e.g., its behavior as an acid or a base will change based on how acidic or basic the solution it is in is). To that end, given the pH of the solution they are operating in (~4.3?), they would need to be aware that any pH change due to "other issues" could change effectiveness at any time for this select purpose (e.g., a sudden unintended discharge of a base or basic solution into this environment could affect how effective the chemical application is).
- Polymers are not an indication of safety, particularly in conditions that are not pH neutral, as they may degrade relatively quickly in acidic or basic solutions to their monomeric building blocks, which may pose much clearer risks. A great example of this is PVC, and its highly toxic monomer, VC. While polymers have many categorical exemptions under TSCA Sections 5 and 8(a)/(b) for Nalco, if the solution that the PRP adds this chemical substance to degrades the polymer(s) into monomers (e.g., the more basic chemical substance on which the polymer is based), the PRP may actually be incidentally manufacturing a TSCA chemical, or other chemical substances of relevance to other statutes (e.g., CERCLA, EPCRA, RCRA). This is why it is important to know the chemical constituency in WWT or direct discharge scenarios for non-pH-neutral environments.

Thanks!

Cheers,

**Bradley Grams**  
Federal Chemical Programs Coordinator



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**From:** Beslow, Mike  
**Sent:** Monday, June 12, 2017 3:17 PM  
**To:** Mendez, Thomas <mendez.thomas@epa.gov>; Cullen, Raymond <cullen.raymond@epa.gov>; Whelan, Ann <whelan.ann@epa.gov>; Riley, Ellen <riley.ellen@epa.gov>; Grams, Bradley <grams.bradley@epa.gov>

**Cc:** Dixit, Naeha <dixit.naeha@epa.gov>; Krueger, Thomas <krueger.thomas@epa.gov>

**Subject:** Fwd: Iron Guard Usage at ArcelorMittal Central Treatment Plant

Begin forwarded message:

**From:** "Barnett, Thomas R" <Thomas.Barnett@arcelormittal.com>

**Date:** June 12, 2017 at 3:03:58 PM CDT

**To:** "Beslow, Mike" <beslow.mike@epa.gov>

**Cc:** "Benoit, Simonne T" <Simonne.Benoit@arcelormittal.com>

**Subject:** Iron Guard Usage at ArcelorMittal Central Treatment Plant

Mike, in response to your questions:

- 1) Ironguard is being added at the head of the treatment plant, just after the wet well.
- 2) This is a continuous application. Initial feed is based on a worst case scenario of influent turbidity 40-50 ntu (identified during a two week period of bench testing), at which 5 ppm is required for effective emulsion breaking.
- 3) We are adding 18 Gallons per day of Ironguard
- 4) This product is an amphoteric polymer (providing capabilities of reacting chemically as an acid or base) designed to quickly and efficiently break out oil-in-water emulsions, latex emulsions and remove fine TSS particles from wastewater. We currently use this particular product at Indiana Harbor East where oil/water emulsions have been a problem, with excellent success.

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